

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/591,610
Applicant(s) : MARIO SCHOLZ, ET AL.
Filed : September 5, 2006
TC/A.U. : 1767
Examiner : Michael A. Salvitti
Title : SILICONE RUBBER

Docket No. : 032301.592

Confirmation No. 3091

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.132

I, Dr. Mario Sholz state:

1. I am a named co-inventor in the above-mentioned patent application.
2. My CV is attached as Exhibit A.
3. I am familiar with the Advisory Action mailed November 4, 2011, the final Office Action with a mailing date of July 28, 2011 and the response filed October 14, 2011. In particular, I considered the response and the following documents: Azechi et al. (U.S. 6,331,358), Scholz et al. (U.S. 2003/0195290) and Kobayashi et al. (U.S. 2002/0077412).
4. I have reviewed the table appearing on page 9 of the response, above, and affirm that I provided the input reflected in the table and the paragraph which follows the table. The calculations described in the paragraph preceding the table and employed in the recalculations reflected in the table are conventional and well known.

5. The table, which follows, is the same as that identified in paragraph 4:

	Factor	Azechi	Scholz (present invention) 20% silica
Hardness		40-44 (JIS K- 6301)	41-45 (Shore A)
Elongation [%]	-	450-520	290-350
Tensile strength [N/mm ²]	1 kgf/cm ² = 0.0981 N/mm ²	6.4-7.1	4.0-5.5
Viscosity [Pa*s] initial Viscosity [Pa*s] 5 days	1 Poise = 0.1 Pa*s	300-350 600-1000	51-55 -

6. The elongation, tensile strength and viscosity values appearing in the table are lower than those reported by Azechi et al. Further, the characteristics of hardness and viscosity are routinely used in this technical area to compare silicone rubber products. The comparisons reported in the specification of the application, identified above, suggest the low viscosity of the present invention is due to the structural modification of the pyrogenic silica. It was not certain at the time the application was filed that the use of a destructured, surface modified silica as a filler, especially at the higher concentration possible with the invention, would produce the reported low viscosity levels without adversely impacting other silicone rubber properties, e.g. hardness.

7. Further, based on my experience in this technical area, liquid silicone rubber (LSR) is in particular characterized by their hardness and their viscosity. A desired property for an LSR is low viscosity (i.e. staying liquid) while maintaining hardness which is advantageous for their application, especially for injection molding, e.g. present application, page 11 lines 1-23.

8. The undersigned hereby declares all statements made herein are of my own knowledge, are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

This ____ day of December 20, 2011.



Dr. Mario Sholz

Dr. Mario Scholz studied chemistry at the Georg-August-University of Göttingen. He received his diploma degree in 1987 and his Ph-D. in 1990. Since March 1990 he is working in the R&D and Technical Service Center for inorganic materials at Evonik Industries (former Degussa AG). He was responsible for carbon black developments for the tyre industry and zeolite catalysts for the petrochemical industry. Since 1997 he is leading the applied technology department of the market segment Silicone & Resins of Evonik Industries. He is globally responsible for all laboratories and pilot plants dealing with HTV-, LSR- and RTV-2C- silicone rubber and RTV-1C silicone sealants. He works together with the global key accounts of Evonik Industries in the relevant market segment. He gave speeches on several silicone elastomer conferences in the US, Europe and China lately at the Silicone Elastomers Conference 2011 at Cologne in Germany. He is the author of several papers lately published in the technical service magazine for the rubber industry "RubberWorld" June 2011. He is the official representative of Evonik Industries within the german IVD (Industrieverband Dichtstoffe) representing the german sealants manufacturer.